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09/653,713	09/05/2000	Stephen R. Carter	6647-15	8261

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· EXAMINER
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ART UNIT	PAPER NUMBER
2654	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/653,713	CARTER ET AL.
	Examiner	Art Unit	
	Lamont M Spooner	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 September 2000</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 September 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2, 3</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Specification

1.   The referenced US application titled, A METHOD AND MECHANISM FOR THE

CREATION, MAINTENANCE, AND COMPARISON OF SEMANTIC ABSTRACTS, page

1 and 3 of the specification, does not contain the US patent application serial number,

or file date and thereby will not be considered as incorporated into the application

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 6-13, 15-22, and 24 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the enablement requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to enable one skilled in

the art to which it pertains, or with which it is most nearly connected, to make and/or use

the invention. Applicant does not describe how to construct an impact summary using

selected chains.

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claim 19 recites the limitation "the state vectors" in claim 19, page 14, line 2.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-5, 14-16, and 23, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Conklin et al. (herein referred to as Conklin, US Patent No. 6,363,378

filed Oct. 13, 1998) in view of Luciw et al. (herein referred to as Luciw, US Patent No.

5,390,281 Feb. 14, 1995).

Conklin and Luciw are analogous art in that they involve computer implemented

information comparison.

As per **claims 1, 14, and 23**, Conklin discloses a computer-implemented method

for building a template specifying an emotional response to a content stream, the

method comprising:

selecting a dictionary, the dictionary including a plurality of concepts (Fig. 3 item

200, C.10.lines 31-51), one concept identified as a maximal element, and a plurality of

chains connecting the maximal element to each concept in the directed set (C.7.lines

39-50, dictionary-C.12.lines 1-45);

selecting a set of intentional stance basis chains to form a basis (Fig. 6,

C.12.lines 1-18-""places of interest" is a subcategory under the category "tourisim", "is

a" being the basis, each chain contains the basis, "is a" as a categorical relation to it's

parent, thus forming an intentional stance basis chain);

selecting at least one concept in the dictionary (Fig. 5 items 410-490);

creating a state vector in a topological vector space for each selected concept

(C.4.lines 39-C.5.line 15-document theme vector), wherein each state vector includes

as at least one measure of how concretely the concept is represented in each chain in

the basis (C.7.line 62-C.9.line 26-each theme/node vector, interpreted as state vectors

contain a parent and descendant weight identifying how concretely the concept is

represented in each chain in the basis); and

Conklin does not disclose:

assembling the state vectors into a template; and

associating an action with the template.

However, Luciw teaches assembling information into a template and associating

an action with the template (C.8.lines 3-55, C.11.lines 10-32). Therefore, at the time of

the invention, it would have been obvious to one ordinarily skilled in the art to modify

Conklin with Luciw by placing the state vectors into a template and associating an

action with the template. The motivation for doing so would have been to generate

templates which contain directed information slots to perform a task upon meeting

satisfying conditions (C.7.lines 55-63, C.11.lines 21-32).

As per **claim 2**, Conklin and Luciw disclose all of the limitations of claim 1, upon

which claim 2 depends. Conklin does not disclose:

associating an action includes assigning a threshold distance to the action so

that the action will be performed when the content stream is within the threshold

distance of the template.

However, Luciw teaches (C.13.lines 13-41) associating an action includes assigning a threshold distance to the action so that the action will be performed when the content stream is within the threshold distance of the template (C.13.lines 1-25, the weight measures/defines the distance). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to modify Conklin with Luciw by including a threshold distance the action associated with the template. The motivation for doing so would have been to allow a threshold level to initiate an action automatically (C.13.lines 26-34).

As per **claim 3**, Conklin and Luciw disclose all of the limitations of claim 2, upon which claim 3 depends. Conklin does not disclose:

associating an action includes associating a plurality of actions with the template; and

assigning a threshold distance includes assigning a unique threshold distance to each action so that the action will be performed when the content stream is within the assigned threshold distance of the template.

However, Luciw teaches associating an action includes associating a plurality of actions with the template (C.11.lines 10-20, associated action includes, faxing, filing, scheduling) and assigning a threshold distance includes assigning a unique threshold distance to each action so that the action will be performed when the content stream is within the assigned threshold distance of the template (C.13.lines 1-54, C.17, C.18-each action has an unique Max threshold level which initiates the template associated action, C.17.lines 43-45). Therefore, at the time of the invention, it would have been obvious to

one ordinarily skilled in the art to modify Conklin with Luciw by assigning unique

thresholds associated with actions which are associated with a template for

performance when a content stream is within threshold distance to the template. The

motivation for doing so would have been to allow the threshold to be set to a particular

level that will enable a unique action to be performed (C.17.lines 1-18).

As per **claim 4**, Conklin and Luciw disclose all of the limitations of claim 1, upon

which claim 4 depends. Conklin does not disclose:

assigning an action includes assigning a plurality of actions to be performed

when the content stream is within one of a plurality of threshold distances of the

template each action to be performed when the content stream is within a unique range

of distances of the template.

However, Luciw teaches assigning an action includes assigning a plurality of

actions to be performed when the content stream (C.16.lines 54, 55) is within one of a

plurality of threshold distances of the template (C.16.lines 54-68, C.17.lines 1-18), each

action to be performed when the content stream is within a unique range of distances of

the template (C.13.lines 28-30, user defines unique threshold value before each action

is to be performed). Therefore, at the time of the invention, it would have been obvious

to one ordinarily skilled in the art to modify Conklin with Luciw by assigning a plurality of

actions to be performed when a content stream is within a unique threshold distance of

a template. The motivation for doing so would have been to allow the threshold to be set

to a particular level that will enable a unique action from a plurality of actions to be

performed (C.17.lines 1-18), at each threshold level.

As per **claim 5**, Conklin and Luciw disclose all of the limitations of claim 1, upon

which claim 5 depends. Conklin further discloses:

constructing a centroid vector from the state vectors (C.6.lines 1-51, C.6.lines 52-

64, cluster/focal vector, see clustering discussion C.7-C.10).

Conklin does not disclose.

constructing a centroid vector <u>for the template</u> from the state vectors.

However, Luciw teaches (C.8.lines 34-62) having a template, which contains

centroidal data (C.7.line 55-C.8.line 62). Therefore, at the time of the invention, it would

have been obvious to one ordinarily skilled in the art to modify Conklin with Luciw by

building a centroid vector for the template from state vectors. The motivation for doing

so would have been to construct a template that contained information relating to a

centroid concept (C.8.lines 34-55).

As per **claim 15**, Conklin and Luciw disclose all of the limitations of claim 14,

upon which claim 15 depends. Conklin does not disclose:

a threshold distance for the template; and

means for performing the action associated with the template when an impact

summary of the content stream is within the threshold distance of the template.

However, Luciw teaches (C.13.lines 1-25, the weight measures/defines the

distance) having a threshold distance for the template and performing the action

associated with the template when an impact summary of the content stream

(C.11.lines 4-55, the Significant Object set, constructed from the content stream, is

interpreted as the impact summary) is within the threshold distance of the template

(C.13.lines 13-41). Therefore, at the time of the invention, it would have been obvious to

one ordinarily skilled in the art to modify Conklin with Luciw by having a threshold

distance for a template, wherein an action associated with the template is performed

when an impact summary of the content stream is within a threshold distance of the

template. The motivation for doing so would have been to allow a threshold level to

initiate an action automatically (C.13.lines 26-34).

As per **claim 16**, Conklin and Luciw disclose all of the limitations of claim 15,

upon which claim 16 depends. Conklin does not disclose:

the threshold distance includes a plurality of threshold distances for the template;

the action includes a plurality of actions associated with the template; and

the means for performing the action includes means for performing one of the

plurality of actions when the impact summary of the content stream is within one of the

threshold distances of the template.

However, Luciw teaches the threshold distance includes a plurality of threshold

distances for the template.(C.13.lines 28-30, user defines unique threshold values

before each action is to be performed, C.17-C.18, plurality of thresholds values set for

each action); and performing the action includes performing one of the plurality of

actions when the impact summary of the content stream (C.11.lines 4-55, the Significant

Object set, constructed from the content stream, is interpreted as the impact summary,

C.16.lines 54, 55-content stream) is within one of the threshold distances of the

template (C.16.lines 54-68, C.17.lines 1-18). Therefore, at the time of the invention, it

would have been obvious to one ordinarily skilled in the art to modify Conklin with Luciw

by performing one of a plurality of actions associated with a template when an impact

summary of a content stream is within one of a plurality of threshold distances of a

template.. The motivation for doing so would have been to allow the threshold to be set

to a particular level that will enable an action from a plurality of actions to be performed

(C.17.lines 1-18), at threshold levels due to the summarization of content.

8.   Claims 6-11, 13, 17-22, and 24 rejected under 35 U.S.C. 103(a) as being

unpatentable over Luciw in view of Castelli et al. (herein referred to as Castelli, US

Patent No. 6,122,628, Oct. 31, 1997).

Luciw and Castelli are analogous art in that they involve computer implemented

information comparison.

As per **claim 6, 17 and 24**, Luciw discloses a computer implemented method for

comparing a template with a content stream to determine whether the content stream

provokes an emotion response, the method comprise:

constructing the template, the template including an associated action (C.13.lines

13-41) and threshold distance (C.13.lines 1-25, the weight measures/defines the

distance).

constructing a summary for the content stream (C.10.lines 12-53-Signigicant

object (SO) set is interpreted as the summary);

comparing the summary with the template (C.12.lines 24-62);

Luciw does not disclose:

constructing the template in a topological vector space, the template including an

associated action and threshold distance;

constructing an <u>impact</u> summary for the content stream; and

comparing the <u>impact</u> summary with the template.

However, Castelli teaches (C.9.lines 45-53, Fig. 5) constructing a template in a

topological vector space, constructing an impact summary for a content stream

(C.11.line 9-C.12.line 61-through singular value decomposition, from a content stream,

a reduced dimension cluster is generated, which is interpreted as the impact summary

from vector information in a topological vector space), and comparing the impact

summary with the template (Fig. 5). Therefore, at the time of the invention, it would have

been obvious to one ordinarily skilled in the art to modify Luciw with Castelli by

constructing a template have an associated action and threshold distance, in a

topological vector space. The motivation for doing so would have been to measure the

distance between the template and another object in a topological vector space order to

detect similarity (C.5.lines 12-20, C.7.lines 17-20, C.9.lines 55-60).

As per **claims 7 and 18**, Luciw and Castelli disclose all of the limitations of claim

6, upon which claim 7 depends. Luciw further discloses:

comparing the summary with the template (C.12.lines 24-62);

Luciw does not disclose:

comparing the impact summary with the template includes <u>measuring a distance</u>

<u>between the impact summary and the template</u>.

However, Castelli teaches (C.9.line 16-C.10.line 56) measuring a distance

between a impact summary and a template (Fig. 5). Therefore, at the time of the

invention, it would have been obvious to one ordinarily skilled in the art to modify Luciw

with Castelli by measuring a distance between the impact summary and the template. The motivation for doing so would have been to use distance, which is the most commonly used similarity measure between two vectors, to determine the similarity between an impact summary and a template (C.7.lines 52-61).

As per **claim 8**, Luciw and Castelli disclose all of the limitations of claim 7, upon which claim 8 depends. Luciw does not disclose:

measuring a distance includes performing a topological vector space transformation on the impact summary.

However, Castelli teaches (C.11.lines 9-54-transformation matrix) measuring a distance includes performing a topological vector space transformation on the impact summary. Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to modify Luciw with Castelli by performing a topological vector space transformation on the impact summary. The motivation for doing so would have been to include the impact summary in a topological vector space for use in precision for vector matching and recall purposes (C.11.lines 25-40).

As per **claims 9 and 21**, Luciw and Castelli disclose all of the limitations of claim 7, upon which claim 9 depends. Luciw further discloses:

performing the action associated with the template (C.16.lines 64-67) if the distance between the summary and the template (C.13.lines 13-15)) is less than the threshold distance of the template (C.17.lines 1-18).

Luciw does not disclose:

the summary is an impact summary.

However, Castelli teaches constructing an impact summary (C.6.lines 6-21).

Therefore, at the time of the invention, it would have been obvious to one ordinarily

skilled in the art to modify Luciw with Castelli by incorporating an impact summary. The

motivation for doing so would have been to measure the distance between the template

and an impact summary in a topological vector space order to detect similarity (C.5.lines

12-20, C.7.lines 17-20, C.9.lines 55-60) in order to determine an appropriate action to

perform.

As per **claims 10 and 19**, Luciw and Castelli disclose all of the limitations of

claim 7, upon which claim 10 depends. Luciw does not disclose:

measuring a distance includes locating a centroid vector for each of the template

and the impact summary.

However, Castelli teaches (Fig. 5, C.9.line 15-C.10.line 56, centroidal clusters

are centroid 1, centroid 2, "produce a representative vector for each cluster). Therefore,

at the time of the invention, it would have been obvious to one ordinarily skilled in the art

to modify Luciw with Castelli by measuring a distance between the centroid of a

template and impact summary. The motivation for doing so would have been to

generate a searchable index based on centroidal information (C.10.lines 42-56).

As per **claim 11**, Luciw and Castelli disclose all of the limitations of claim 10,

upon which claim 11 depends. Luciw does not disclose:

measuring a distance further includes measuring an angle between the template

centroid vector and the impact summary centroid vector.

However, Castelli teaches (Fig. 5, C.9.lines 62-66) measuring a distance further includes measuring an angle between the template centroid vector and the impact summary centroid vector. Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to modify Luciw with Castelli by measuring an angle between the template centroid vector and the impact summary centroid vector. The motivation for doing so would have been to an angle method of measuring distance, which is a commonly used similarity and distance measure between two vectors, to determine the similarity between an impact summary centroid and a template centroid (C.7.lines 52-61).

As per **claim 13**, Luciw and Castelli disclose all of the limitations of claim 6, upon which claim 13 depends. Luciw does not disclose:

constructing an impact summary includes iteratively constructing the impact summary for the content stream to track changes in the content stream.

However, Castelli teaches (C.12.lines 34-39) constructing an impact summary includes iteratively constructing the impact summary for the content stream to track changes in the content stream. Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to modify Luciw with Castelli by iteratively constructing an impact summary of a content stream. The motivation for doing so would have been to track the precision of the changes in the impact summary as the content stream varies in order to recall pertinent information (C.12.lines 28-39).

As per **claim 20**, Luciw and Castelli disclose all of the limitations of claim 19, upon which claim 20 depends. Luciw does not disclose:

the means for measuring a distance between the impact summary and the

template includes means for measuring a Euclidean distance between the impact

summary and the template.

However, Castelli teaches (C.9.line 16-C.10.line 56) the means for measuring a

distance between the impact summary and the template includes means for measuring

a Euclidean distance (C.9.lines 45-55, C.14.lines 27-67-Euclidean distance measured

from the template vector and the dimension reduction information interpreted as the

impact summary) between the impact summary and the template. Therefore, at the time

of the invention, it would have been obvious to one ordinarily skilled in the art to modify

Luciw with Castelli by measuring an Euclidean distance between an impact summary

and a template. The motivation for doing so would have been to use a well know

method of Euclidean distance, which is a common used distance measuring method

between two vectors, to determine the similarity between an impact summary and a

template (C.7.lines 52-61).

As per **claim 22**, Luciw and Castelli disclose all of the limitations of claim 17,

upon which claim 22 depends. Luciw does not disclose:

the impact summary uses a basis including a second subset of the plurality of

vectors; and

the apparatus includes a transformer for performing a topological vector space

transformation on the impact summary.

However, Castelli teaches having the impact summary using a basis including a

second subset of the plurality of vectors (C.11.lines 25-40-the subset of ordered

eigenvalues in the vector space) and including a transformer for performing a

topological vector space transformation on the impact summary (C.11.lines 9-53-

transformation matrix). Therefore, at the time of the invention, it would have been

obvious to one ordinarily skilled in the art to modify Luciw with Castelli by having a basis

with an impact summary and performing a topological vector space transformation on

the impact summary. The motivation for doing so would have been to increase precision

in similarity and recall (C.11.lines 35-40).

9.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luciw in

view of Castelli et al. and further in view of Huttenlocher.

        Luciw, Castelli and Huttenlocher are analogous art in that they involve computer

implemented information comparison.

        As per **claim 12**, Luciw and Castelli disclose all of the limitations of claim 7, upon

which claim 12 depends. Luciw in view of Castelli does not disclose:

        measuring a distance includes measuring a Hausdorff distance between the

impact summary and the template.

        However, Huttenlocher teaches employing the Hausdorff distance as a

measuring technique to determine the closeness of word images or units/abstracts of

understanding (Abstract, C.12.lines 1-9). Therefore, at the time of the invention, it would

have been obvious to one ordinarily skilled in the art to modify Luciw, and Castelli with

Huttenlocher by measuring a Hausdorff distance between an impact summary and a

template. The motivation for doing so would have been to determine how close two sets

of information were in accordance with one another in a set space, because using the

Hausdorff distance specializes in determining a measure for comparing point sets
(C.13.lines 53-55).

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to
applicant's disclosure.

-    Caid (US Patent No. 5,619,709 Apr. 8, 1997) teaches constructing
an impact summary for a content stream, by singular value
decomposition, constructing a centroid vector for the impact
summary and comparing the impact summary with another vector
represented object, and using a Euclidean method of measuring
similarity between clusters and centroid vectors, and retrieving
information based on a level of matching, interpreted as an
associated action based on a similarity measure.

-    Hazlechurst et al. (US Patent No. 6,289,353 filed Jun. 10, 1999)
teaches measuring distance includes measuring an angle between
two vectors.

-    Tso (US Patent No. 6,085,201 Jul. 4, 2000) teaches comparing a
template with a content stream to determine whether the content
stream provokes a response.

-    Ueda (US Patent No. 6,493,663 filed Dec. 7, 1999) teaches
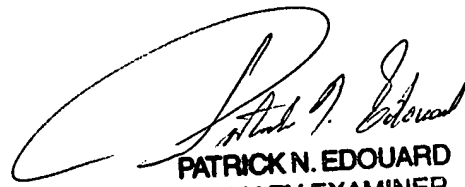developing an impact summary from a content stream.

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lamont M Spooner whose telephone number is

703/305-8661. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on 703/305-9645. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

lms
10/1/04

PATRICK N. EDOUARD
PRIMARY EXAMINER